QUALITY CONTROL IN DATA TRANSFER & STORAGE APPARATUS (30010276)
JORGE ANTONIO SVED, JONATHAN PETER BUCKINGHAM
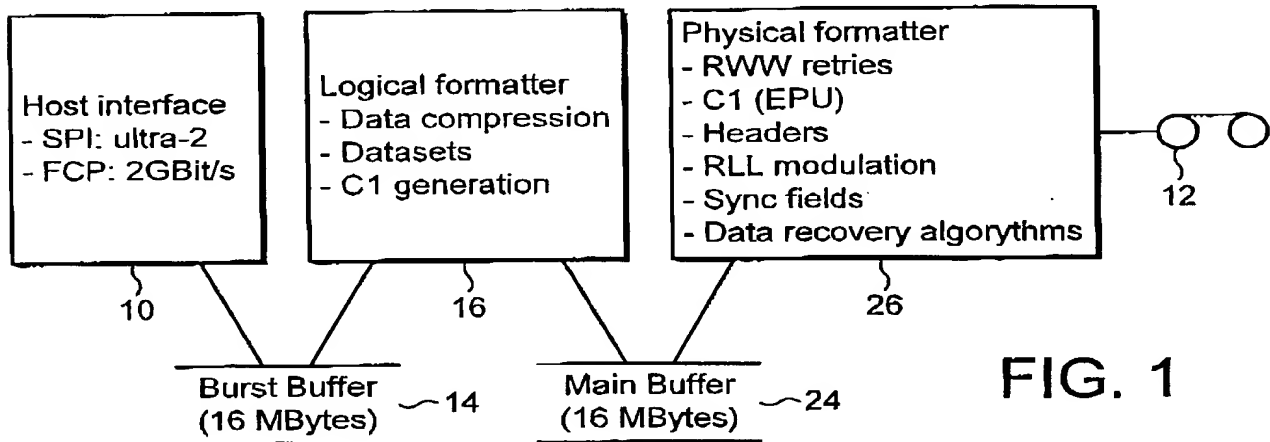
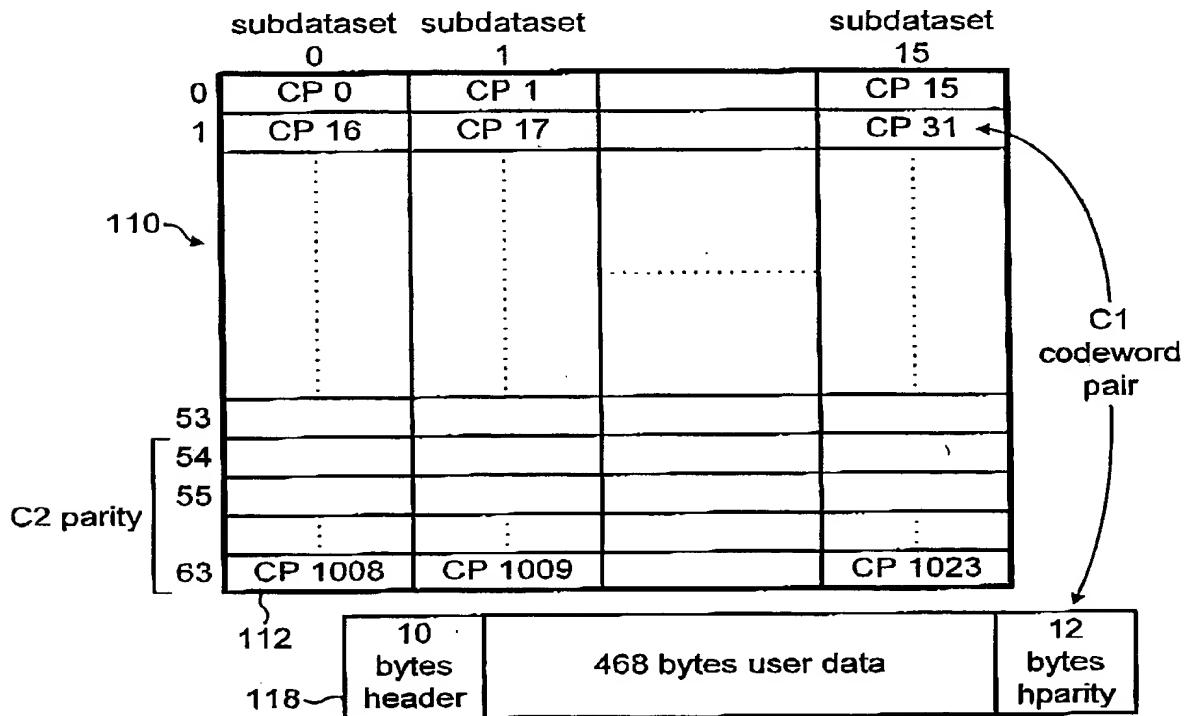Host interface
- SPI: ultra-2
- FCP: 2GBit/s

Logical formatter
- Data compression
- Datasets
- C1 generation

Physical formatter
- RWW retries
- C1 (EPU)
- Headers
- RLL modulation
- Sync fields
- Data recovery algorythms

10

16

26

12

Burst Buffer
(16 MBytes) ~14

Main Buffer
(16 MBytes) ~24

FIG. 1

	subdataset 0	subdataset 1		subdataset 15
0	CP 0	CP 1		CP 15
1	CP 16	CP 17		CP 31
53				
54				
55				
63	CP 1008	CP 1009		CP 1023

110

C2 parity

C1 codeword pair

112

118

10 bytes header	468 bytes user data	12 bytes hparity

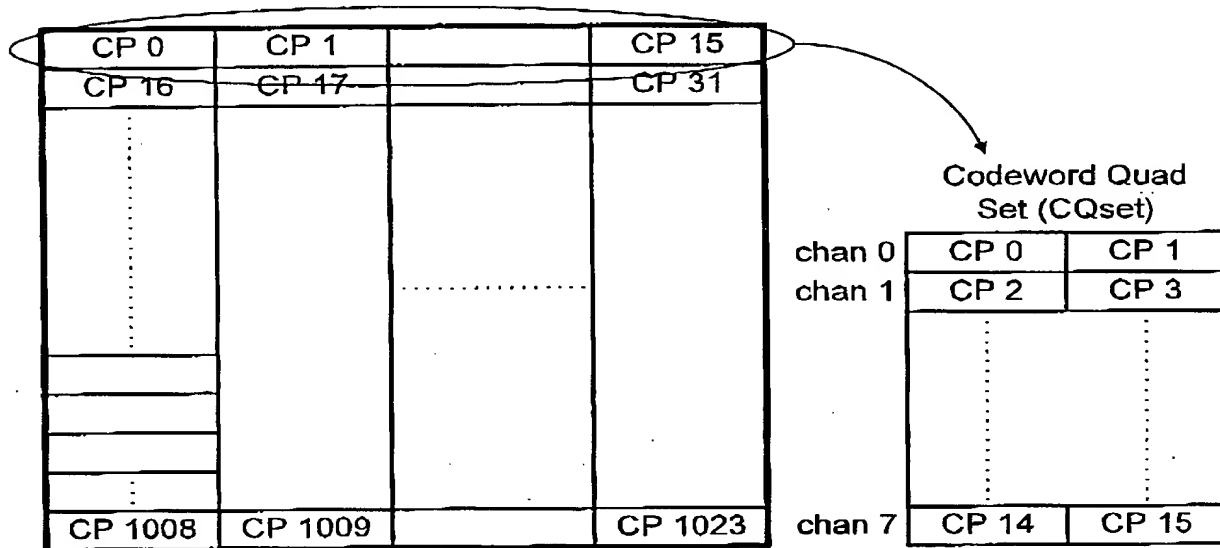**FIG. 2**

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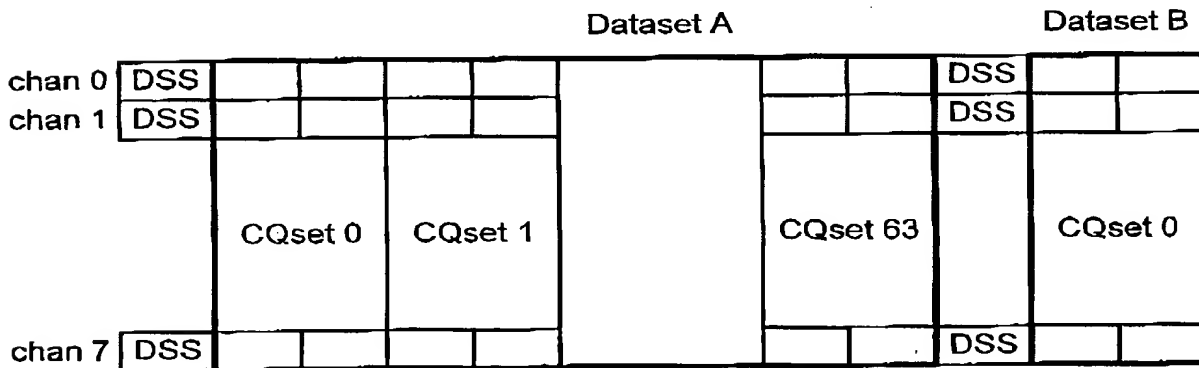| CP 0	CP 1		CP 15
CP 16	CP 17		CP 31
CP 1008	CP 1009		CP 1023

Codeword Quad
Set (CQset)

chan 0	CP 0	CP 1
chan 1	CP 2	CP 3
chan 7	CP 14	CP 15

FIG. 3

Dataset A   Dataset B

	DSS							DSS		
chan 0	DSS							DSS		
chan 1	DSS							DSS		
		CQset 0	CQset 1			CQset 63			CQset 0	
chan 7	DSS							DSS		

FIG. 4

QUALITY CONTROL IN DATA TRANSFER & STORAGE APPARATUS (30010276)
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a	b	c	d	e	f

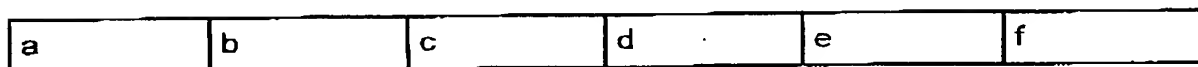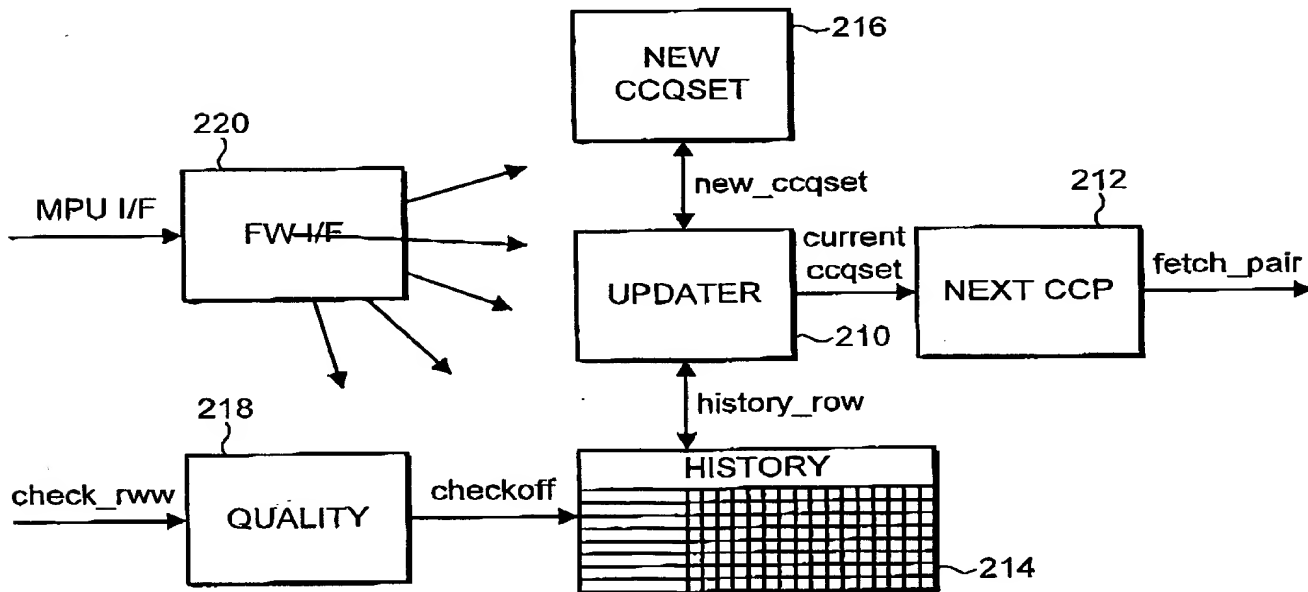## FIG. 5

FIG. 6

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FIG. 7

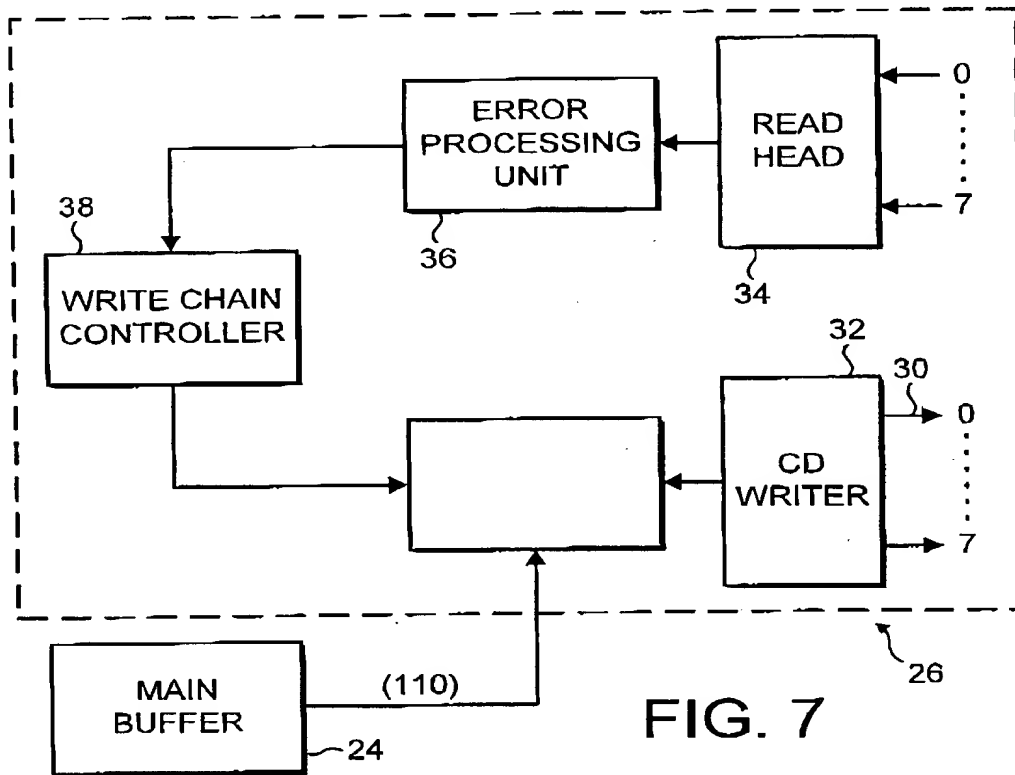| Bit name	Bit	Description
good_ccqs(0).	0	1 => CCQs marked 0000 are *good* 0 => CCQs marked 0000 are *bad*
good_ccqs(1)	1	1 => CCQs marked 0001 are *good* 0 => CCQs marked 0001 are *bad*
good_ccqs(N)	N	1 => CCQs marked N_{bin} are *good* 0 => CCQs marked N_{bin} are *bad*
good_ccqs(14)	14	1 => CCQs marked 1110 are *good* 0 => CCQs marked 1110 are *bad*
good_ccqs(15)	15	1 => CCQs marked 1111 are *good* 0 => CCQs marked 1111 are *bad*

FIG. 8